



NATIONAL PARK SERVICE

Environmental Audit Program

EnviroCheck Sheet

*SPCC Planning
June 2002 Update*

SPCC PLANNING

Spill Prevention Control and Countermeasures (SPCC) planning requirements are provided in the Environmental Protection Agency (EPA) regulations 40 Code of Federal Regulations (CFR) Part 112. These regulations, promulgated under the authority of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA) are designed to ensure that facilities have planned for and taken measures to prevent environmental damage resulting from oil spills.

Given the sensitive environments in which parks are located, spills and leaks from these facilities represent a great environmental liability for the National Park Service (NPS). SPCC planning is a key regulatory compliance requirement, but more importantly, it can be a valuable environmental management tool providing an effective program to minimize the risk of oil spills and subsequent environmental contamination.

APPLICABILITY

NPS facilities are subject to SPCC regulations if they meet the following criteria:

- Due to its location, the facility (i.e., park) could *potentially over any period of time* discharge oil into, upon, or to, any conduit that may lead to navigable waters of the United States or adjoining shorelines;
- and*
- The capacity of any single aboveground storage tank (AST) exceeds 660 gallons of oil; *or*
- The total aboveground storage capacity for the park exceeds 1,320 gallons of oil; *or*
- The total underground oil storage capacity for the park exceeds 42,000 gallons.

If the park has determined that it does not meet the thresholds for a Plan, the auditor should verify whether the thresholds were thoroughly reviewed, whether the applicability determination is up-to-date and that it was thoroughly conducted (e.g., property boundaries were properly identified, all oil storage and handling areas were considered).

Auditor's Guidelines:

Records to Review

- SPCC Plan
- Inventory of ASTs and USTs
- Written description of any spills
- Registration records for all in-service, temporarily out-of-service, and permanently closed tanks
- Records for UST disposal, closure, and removal
- AST and UST inspection records or integrity tests
- "Certification of the Applicability of the Substantial Harm Criteria Checklist"

Features to Observe

- Any areas storing petroleum or non-petroleum oils
- Secondary containment structures
- Spill cleanup equipment
- USTs and ASTs
- Refueling areas
- Venting
- Fill pipes
- Vehicle maintenance area
- Tank gauges

Persons to Contact

- Maintenance supervisor
- Ranger dispatchers and responders
- Registered Professional Engineer (if present)
- Auto mechanics
- Buildings and Utilities staff

DEFINITIONS

Oil: Under the CWA and 40 CFR 112, the definition of oil includes *petroleum-derived oils* such as diesel fuel, heating oil, and gasoline and *non-petroleum oils* such as animal or vegetable oil and biofuel.

Facility: The boundaries of a facility may depend upon several site-specific factors, including but not limited to, the ownership or operation of buildings, structures, and equipment on the same site and the types of activities at the site. Conservatively, parks should look fenceline to fenceline in defining the “facility” boundary and determining SPCC applicability. However, in cases where operational areas are long distances apart, management of fuel storage facilities and spill response may be conducted by discrete operational units. As such, a park may be considered separate facilities. Parks should check with their EPA regional office for site-specific guidance and regional interpretation on the issue of facility boundary. To obtain accurate guidance, the park must identify itself as a federal facility.

Navigable waters: These waters defined under the CWA have been interpreted to cover all surface waters in the US. They have been interpreted to include waters that are not considered navigable under common definition. For example, they include wetlands, mudflats, intermittent streams, sandflats and wet meadows.

Reasonably be expected to discharge oil to navigable waters: As interpreted by the EPA, this condition exists for most NPS facilities. Discharges can reach navigable waters via storm sewers, drainage swales, or other means of conveyance as well as direct discharge via sheet flow. Discharges to groundwater have even been interpreted to meet this requirement if the groundwater is hydrologically connected to the navigable water. An AST on the South Rim of the Grand Canyon two miles away from the Colorado River was determined by EPA Region 9 to reasonably be expected to discharge oil to navigable waters.

LEGAL REQUIREMENTS

Federal

Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA)

Under the CWA and OPA, EPA is responsible for protecting the nation’s waters from the adverse effects of oil spills. The SPCC regulation, which implements section 311(j) of the Clean Water Act, is designed to prevent discharges of oil from facilities and to contain such discharges when they occur.

EPA regions are responsible for administration of the federal SPCC program at facilities within their jurisdiction. The EPA region may have unique regulatory interpretations and Plan preparation guidelines. In addition, many states and local governments (e.g., cities and regional authorities) have specific and/or more stringent requirements for SPCC planning. For example, some states require a separate Oil Discharge Contingency Plan for certain facilities. Parks need to check with their EPA region, state and local authorities for specific requirements and guidance.

When contacting the EPA regional authority, it is necessary to disclose that the inquiry is for a federal facility. For example, regulations applicable to park residences, that would not be applicable to a private residence, would apply since it is located at a federal facility.

De Minimus Oil Storage and Exclusions

Federal regulations **do not** provide any de minimus containers or excluded use for establishing the park's total oil storage volume or oil storage areas that must be counted. Residential heating oil tanks (even ASTs in basements) must be included in calculations for assessing SPCC applicability. Parks should contact representatives from their EPA Region and state to determine if they have issued any further guidance regarding sources to include in their SPCC Plan.

State and Local

Regional offices of the EPA implement SPCC plan regulations. Additional spill planning and response requirements may apply in individual states or localities.

COMPLIANCE REQUIREMENTS

If an NPS facility stores oil above thresholds listed above, they are required to prepare an SPCC plan. The SPCC Plan should clearly address the following three areas:

- Operating procedures in place that prevent oil spills;
- Control measures installed to prevent a spill from reaching navigable waters; and
- Countermeasures to contain, clean up, and mitigate the effects of an oil spill that reaches navigable waters.

How those three areas are addressed in the SPCC plan must be unique to the NPS facility. Development of a unique SPCC Plan requires detailed knowledge of the facility and the potential effects of any oil spill. Each SPCC plan, while unique to the facility it covers, must include certain standard elements to ensure compliance with the regulations. In summary, an SPCC Plan requires the following:

- Explanation of regulatory applicability (i.e., how the park exceeded the plan thresholds);
- General park description including name, function and park drainage patterns;
- Facility diagram which indicates the locations of oil storage and handling;
- Description of oil storage and handling areas;
- Description of past spill events;
- Analysis of potential spill scenarios including predictions of direction and rate of flow and total quantities of oil that could be released;
- Designation of SPCC responsibilities including a park Spill Coordinator;
- Description of spill containment and drainage control structures and equipment for oil storage and handling facilities;
- Description of spill emergency response equipment;
- Description of spill notification procedures;
- Oil Spill Contingency Plan describing spill response and cleanup procedures including coordination with concessioners/contractors, local authorities and spill response contractors;
- Spill Prevention Plan including inspection and monitoring program, tank integrity testing procedures, preventive maintenance and housekeeping procedures, formal spill response training and exercises and security measures;
- Review and update of procedures and documentation;

- Certification that a Substantial Harm Analysis has been conducted for the park and that the park is either not subject to Facility Response Plan (FRP) requirements or that a FRP has been completed (the analysis may be conducted by the park or its SPCC contractor. The analysis certification is addressed as part of the overall SPCC Plan certification, see below);
- Professional engineers' certification (plan update and re-certification required every three years); and
- Management approval (signature of park superintendent).

Updates

The SPCC Plan must be evaluated and reviewed at least every 3 years to incorporate more effective prevention and control technology and be re-certified by a PE. In addition, the SPCC Plan must be amended within six months if there is a change in design, operation or maintenance of oil storage and handling areas and spill response.

Recordkeeping

The most current SPCC Plan must be on file at the NPS facility. Copies of contractor SPCC Plans should also be maintained by the NPS facility. Filing the SPCC Plan with the EPA is not required, except in special circumstances involving significant releases.

In addition to maintaining a copy of the SPCC Plan, other SPCC-related records must be maintained at the NPS facility, including:

- Inspection and monitoring logs and tank testing results;
- Training records;
- Documentation of spill reports;
- Documentation of spill response and cleanup procedures; and
- Regulatory agency correspondence.

Equipment Requirements

SPCC regulations require that appropriate spill, leak containment, and/or drainage control structures or equipment be provided for oil storage and handling areas. These may include one or more of the following:

Onshore Facilities

- Dikes, berms, retaining walls, curbing
- Culverting, gutters, other drainage systems
- Weirs, booms, other barriers
- Spill diversion or retention ponds
- Sorbent materials

Offshore Facilities

- Curbing
- Sumps and collection systems

Valves or other positive means to prevent spillage or leakage must restrain drainage from diked areas. Undiked areas must drain to oil retention ponds, lagoons or catch basins.

If this equipment cannot be practically installed, the reasons why must be documented in the SPCC Plan, tanks and valves must be more rigorously tested for integrity, and the SPCC Plan Oil Spill Contingency Plan section must clearly demonstrate other means to control releases.

Implementation

An SPCC Plan that is not implemented is not useful. SPCC Plan-specified spill containment and emergency response equipment must be installed and maintained. Spill response coordination must be conducted with contractors and local authorities. Training and spill response exercises must be conducted periodically (see discussion below). Inspection, monitoring, tank integrity testing, and preventive maintenance programs must occur.

Personnel and Training

Personnel and training requirements listed at 40 CFR 112.7 are as follows:

- Facilities are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.
- Facilities must have a designated person who is accountable for oil spill prevention and who reports to line management.
- Facilities must conduct spill prevention briefings for their operating personnel often enough to ensure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

Training must cover all aspects of the SPCC Plan. The training may include classroom as well as field exercises. There is no required duration for the training. The length of training should be commensurate with the complexity of the facility. Training should be conducted for all new personnel involved in petroleum handling operations, and whenever operations change significantly. Refresher training should be conducted at least once annually.

NPS VERSUS CONTRACTOR/CONCESSIONER OPERATIONS AND EQUIPMENT

NPS Special Directive 90-6 delineates underground storage tank (UST) compliance responsibilities for concessioner owned and/or operated systems. The same criteria can be used as general guidance in establishing SPCC responsibilities (see attached table at the end of this discussion). Ultimately, if the park is responsible for responding to a release from the contractor and/or concessioner equipment, then the equipment should be considered in the NPS SPCC applicability determination and SPCC Plan for the park (responsibilities are summarized in Table 1).

It is the responsibility of the NPS to ensure that all concessioner-owned and/or -operated oil storage and handling facilities and equipment assigned to concessioners under a Concession Contract, or owned and/or operated by concessioner or contractors, are in compliance with federal, state or local regulations by:

- Inspecting concessioner /contractor facilities; and
- Reviewing the SPCC Plan, inspection, monitoring and testing logs and reports.
- Ensuring requirements and responsibilities for operating and maintaining oil storage and handling facilities and equipment and for responding to spills are clearly defined in the Concession Contract.

Table 1: Summary of Oil Storage/Handling Facility Concessioner Responsibilities*		
Owner	Operator	Responsible for SPCC Compliance**
NPS	NPS	NPS
Concessioner	Concessioner	Concessioner
NPS	Concessioner	Facility assigned to concessioner – concessioner responsible Facility not assigned to concessioner - NPS responsible
NPS	NPS and Concessioner (No Sales to Public)	Facility assigned to concessioner – concessioner responsible Facility not assigned to concessioner - NPS responsible

* Adopted from NPS Special Directive 90-6.

** Regardless of assignment of operator responsibility, the NPS should consider concessioner and contractor facilities in its SPCC applicability determination and SPCC Plan if the park will be responding to a release from these facilities.

Substantial Harm Determinations and Facility Response Planning

EPA has established more stringent spill prevention and Facility Response Plan (FRP) requirements for facilities that could be reasonably expected to cause “substantial harm” to the environment due to the type of transfer operation (e.g., over water), oil storage capacity, lack of secondary containment, proximity to fish and wildlife and sensitive environments, drinking water supplies and others (40 CFR 112.20-21). There are two methods to establish “substantial harm”:

- Substantial Harm Analysis; and
- EPA Regional Administrator Determination.

All parks subject to SPCC requirements **must** conduct a Substantial Harm Analysis to determine if an FRP is necessary for the park pursuant to 40 CFR 112.20. Most parks will not meet the “substantial harm” criteria. Parks that do not meet the substantial harm criteria **must certify in the SPCC Plan** that the analysis was completed and that the park is not subject to the FRP requirements. Facilities that meet the substantial harm criteria must prepare, submit to their EPA region, and implement, an FRP. The FRP submission deadline has already passed for existing facilities (operating August 30, 1994 or before). FRP applicability flowcharts are attached to this checksheet.

COMMON VIOLATIONS OF SPCC PLANNING REGULATIONS DISCOVERED AT FEDERAL FACILITIES

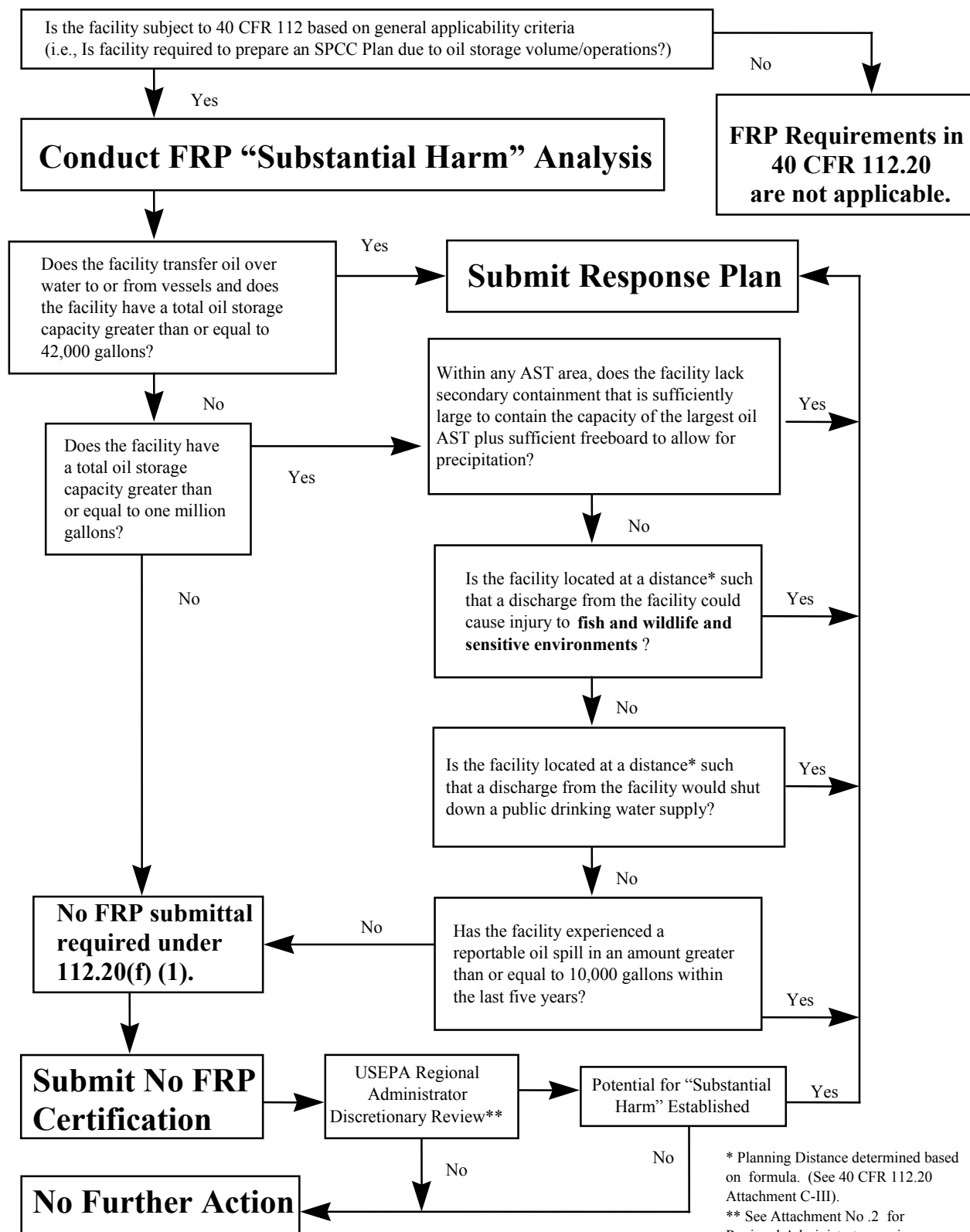
Several EPA regions have developed a list of common violations that have been discovered during multi-media compliance audits at federal facilities. These lists do not include all program areas addressed by the NPS Environmental Audit Program. However, since EPA has specifically identified these issues as common compliance violations, they are being identified in the appropriate check sheet. Auditors should keep these issues in mind as they review check sheet audit questions. EPA-identified violations of SPCC planning requirements include::

- The facility lacks a plan.
- The plan is missing key elements required in 40 CFR 112.7.
- The plan has not been reviewed every 3 years.
- A registered Professional Engineer (PE) has not certified the plan.

FOR MORE INFORMATION

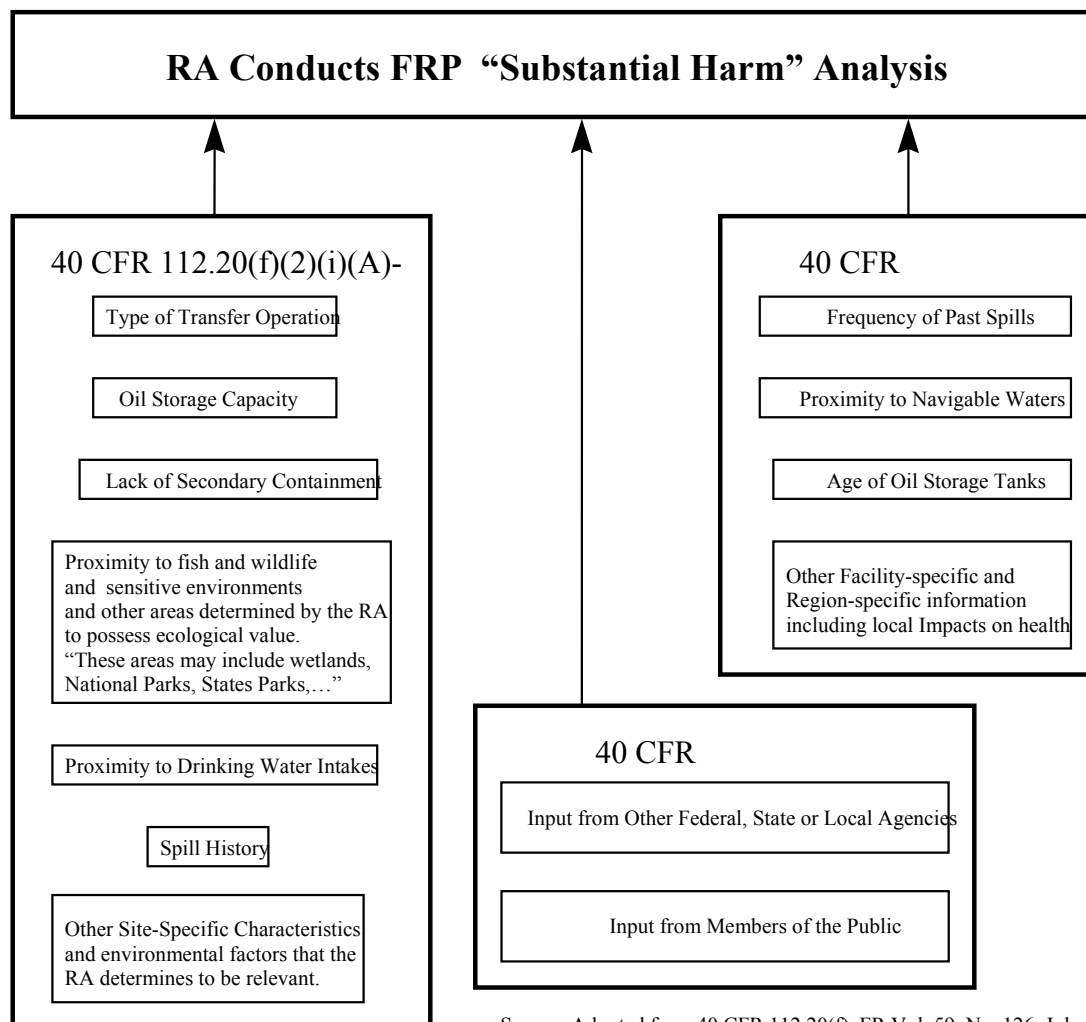
- NPS Fuel Storage Management Handbook. It provides detailed information from regulatory requirements to design guides and a model SPCC Plan.
- RCRA/UST, Superfund, EPCRA Hotline: 1-800-424-9346.
- EPA SPCC Web Site: <<http://www.epa.gov/oilspill/index.htm>>

Flowchart of Criteria for FRP Applicability



Source: Modified from 40 CFR 112, Attachment C-1, FR Vol.. 59, No. 126, July 1, 1994.

Flowchart of Criteria for Regional Administrator FRP Applicability (“Substantial Harm”)



Source: Adopted from 40 CFR 112.20(f), FR Vol. 59, No. 126, July 1, 199

The regional administrator (RA) can independently determine if the facility has the potential to cause substantial harm regardless of the substantial harm analysis conducted by the facility. The RA determination is discretionary. It is more likely to occur for facilities that have a past history of spills, have large oil handling operations, have ecologically valuable resources or other criteria as indicated above. The last criteria, ecological value may be the most important trigger with respect to National Parks.



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CHECKLIST ITEM	PRIORITY	NOTES
<i>SPCC Plan Requirements</i>		
1. If the park stores greater than the following quantities of oil, with the potential to discharge to waterways, verify that the park has developed and implemented an SPCC Plan: <ul style="list-style-type: none"> • 660 gallons in any single aboveground container; or • A total of 1320 gallons in all aboveground containers; or • 42,000 gallons in underground tanks. [40 CFR 112.1(d)(2)] 	2	
2. Park staff has contacted the EPA regional SPPC authority to determine if park operations trigger SPCC plan requirements (note, when making inquiries of regional authorities, it was disclosed that park operations take place at a federal facility as opposed to a private company). [BMP]	3	
3. Procedures are in place to determine new federal, state, or local regulations applicable to their operations as a federal facility. [BMP]	3	
<i>Questions 4-11 apply only if an SPCC Plan is required</i>		
4. The SPCC Plan is maintained on-site or at the nearest field office. [40 CFR 112.3(e)]	2	
5. Determination of substantial harm is documented by completing the "Certification of the Applicability of the Substantial Harm Criteria Checklist." [40 CFR 112.20(f)(1) and 40 CFR 112 (App. C-II)]	2	
6. Documentation is included in its SPCC Plan that it does not meet the substantial harm criteria. [40 CFR 112 (App. C, 3.0)]	2	
7. A designated person is assigned to be accountable for oil spill prevention that reports to line management. [40 CFR 112.7(e)(10)(ii)]	2	
8. The SPCC Plan is reviewed and certified by a registered Professional Engineer. [40 CFR 112.3(d)]	2	
9. The SPCC Plan is amended whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shore lines. Such amendments are fully implemented as soon as possible, but not later than six months after such change occurs. [40 CFR 112.5(a)]	2	
10. A review and evaluation of the SPCC Plan is completed at least once every three years from the original date of the plan. After that review and evaluation, the SPCC Plan is amended within six months to include more effective prevention and control technology <i>if</i> : (1) Such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of the review. [40 CFR 112.5(b)]	2	
11. Any amendments to the SPCC Plan (due to facility changes or following the three-year review) are certified by a Professional Engineer in accordance with Sec.112.3(d). [40 CFR 112.5(c)]	2	

This document does not necessarily contain all information needed to determine compliance status.

CHECKLIST ITEM	PRIORITY	NOTES
<p align="center">SPCC Plan Content</p> <p><i>Questions 12 - 25 relate to SPCC Plan contents. For each question, the auditor should verify whether the item is included or appropriately described, in the SPCC Plan, and whether item is implemented. If the park is required to have an SPCC Plan, but does not (see Question 1 above), each of the Secondary Containment and Spill Response questions should be evaluated for implementation. If the park is not required to have an SPCC Plan, questions should be reviewed as BMPs. (Priority 3)</i></p>		
12. If a spill occurred in the park, within the past 12 months of the date of the SPCC Plan, the plan contains a written description of each spill, corrective action taken, and plans for preventing recurrence. [40 CFR 112.7(a)]	2	
13. In areas where there is reasonable potential for equipment failure (such as tank overflow, rupture, or leakage, including areas of fuel transfer), the plan includes a prediction of the direction, rate of flow, and total quantity of oil that could be discharged. [40 CFR 112.7(b)]	2	
<p align="center">Secondary Containment</p>		
14. Appropriate containment and/or diversionary structures or equipment is provided to prevent discharged oil from reaching navigable waters. [40 CFR 112.7(c)]	2	
15. If secondary containment is not practicable, SPCC Plan includes a strong oil spill contingency plan and a written commitment of manpower and materials required to control and remove any harmful quantity of oil. [40 CFR 112.7(d)]	2	
16. Drainage from diked areas is restrained by valves or other means to prevent a spill from discharging. [40 CFR 112.7(e)(1)(i)]	2	
17. Flapper-type drain valves are not used to drain diked storage areas. Valves used for the drainage of diked areas are manual, open-and-close design. [40 CFR 112.7(e)(1)(ii)]	2	
18. Drainage of rainwater is allowed from the diked area of a bulk storage tank area by bypassing any park treatment system and discharging into a storm drain or an open water course, lake, or pond, only if: <ul style="list-style-type: none"> • The bypass valve is normally sealed closed, and • Inspection of the run-off rainwater ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR part 110 (i.e., there is no sheen on the discharging water). [40 CFR 112.7(e)(2)(iii)(A)] 	1	
19. All bulk storage tank installations are constructed so that secondary containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas are sufficiently impervious to contain spilled oil. [40 CFR 112.7(e)(2)(ii)]	1	
20. Tank truck loading/unloading procedures meet the minimum requirements and regulation established by the DOT. Transfer fuel areas (fueling terminals, islands, other loading areas) are designed with secondary containment large enough to hold a spill of volume equal to the largest compartment of any tank that loads or unloads fuel at the area. Measures (e.g., signs, blocking wheels, observation by the park personnel) are taken to prevent a fueling vehicle from leaving before being completely disconnected from the fuel transfer lines. [40 CFR 112.7(e)(4)(i)-(iii)]	1	
21. Mobile or portable oil tanks are positioned to prevent oil spills from reaching navigable waters, and have secondary containment. [40 CFR 112.7(e)(2)(xi)]	2	

CHECKLIST ITEM	PRIORITY	NOTES
<i>Inspections</i>		
22. ASTs are subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. Operating personnel frequently observe the outside of the tank for signs of deterioration, leaks that might cause a spill, or accumulation of oil inside diked areas. [40 CFR 112.7(e)(2)(vi)]	2	
23. Tank installations are engineered or updated to avoid spills. Consideration is given to providing one or more of the following devices: <ul style="list-style-type: none"> • High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice. • Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level. • Direct audible or code signal communication between the tank gauger and the pumping station. • A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct vision gauges or their equivalent. [40 CFR 112.7(e)(2)(viii)]	2	
24. Visible oil leaks are corrected promptly. [40 CFR 112.7(e)(2)(x)]	1	
25. Records of inspection procedures (including frequencies of inspections), maintenance, and draining of diked areas are included in the park's SPCC Plan, and are kept on site for a minimum of three years. [40 CFR 112.7(e)(8)]	2	
<i>Security</i>		
26. The fueling area is fully fenced, and entrance gates are locked and/or guarded when area not attended. [40 CFR 112.7(e)(9)(i)]	2	
27. Fueling areas are sufficiently illuminated to detect spills during darkness and prevent spills through acts of vandalism. [40 CFR 112.7(e)(9)(v)]	2	
<i>Training</i>		
29. Training is provided to instruct personnel in the operation and maintenance of equipment to prevent discharges of oil and applicable pollution control laws, rules, and regulations. [40 CFR 112.7(e)(10)(i)]	2	
30. The park has scheduled and conducted spill prevention briefings (including descriptions of potential spill events, spill prevention methods, and spill response) for operations personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan. [40 CFR 112.7(e)(10)(iii)]	2	